

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 56

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TERRY E. KUBITZ

Appeal No. 97-2116
Application 07/789,802¹

ON BRIEF

Before STONER, *Chief Administrative Patent Judge*, McCANDLISH, *Senior Administrative Patent Judge* and STAAB, *Administrative Patent Judge*.

STAAB, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Application for patent filed November 12, 1991. The application is a continuation of Application 07/233,856, filed August 18, 1988, now abandoned, which is a continuation of Application 06/936,613, filed December 01, 1986, now abandoned.

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This is a decision on an appeal from the examiner's final rejection of claims 1, 3, 5-10, 12-14 and 16-25, all the claims pending in the application. *We affirm-in-part.*

By way of background, this is the third appeal of the subject matter disclosed in this application. In the parent of the present application, this merits panel, in a decision rendered March 18, 1991, affirmed-in-part the examiner's final rejection of the claims appealed therein. Appellant then filed the present continuation application for the purpose of further prosecution before the examiner. There followed a second appeal. In a decision rendered September 16, 1993, this merits panel reversed the examiner's rejection of all the appealed claims. The examiner, with the group director's approval, then reopened prosecution and entered a number of new rejections against the claims then pending, which ultimately resulted in this third appeal.

Appellant's invention pertains to a thin walled metal container (claims 1, 3, 5-9 and 25) and to a method of making a container (claims 10, 12-14 and 16-24), and in particular to the provision of a thermoplastic sleeve of heat shrinkable

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material around the body of the container for increasing the axial load bearing capacity thereof. The invention is said to enable the

use of thinner gauge metal than heretofore considered possible in such containers. Independent claims 1 and 10, copies of which are found in the appendix to appellant's brief, are illustrative of the appealed subject matter.

The references of record relied upon by the examiner in support of rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103 are:

Potts	3,698,596	Oct. 17, 1972
Cvacho ('423)	3,799,423	Mar. 26, 1974
Cvacho et al. (Cvacho '927)	4,151,927	May 1, 1979
Nixon et al. (Nixon)	B 223,678	Mar. 9, 1976
Sasaki et al. (Sasaki)	3,972,435	Aug. 3, 1976
Conklin	4,138,026	Feb. 6, 1979
Heckman	4,248,030	Feb. 3, 1981
Roales	4,608,284	Aug. 26, 1986
Hoffman	4,844,957	Jul. 4, 1989

The following rejections are before us for review:²

² With respect to each of the rejections involving Cvacho '423 (rejections (c), (d), (e), (g) and (h)), we note the following statement found on pages 11-13 of the answer:

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(a) claims 1, 3, 5, 6 and 8, rejected under 35 U.S.C. § 102(b), as being anticipated by Roales;

(b) claims 7 and 9, rejected under 35 U.S.C. § 103, as being unpatentable over Roales in view of Conklin;

(c) claims 1, 3, 5 and 8, rejected under 35 U.S.C. § 103, as being unpatentable over Cvacho '423 in view of Hoffman, and further in view of Cvacho '927 and Nixon;

The patents to Cvacho et al ['927] and Nixon et al are to be additionally considered part of the rejections, supra, under 35 U.S.C. § 103 where Cvacho ['423] has been applied Appellant alleges [that] the thin inner container of Cvacho ['423] is made of paper or plastic and would collapse if squeezed by a shrunk sleeve. . . . To the degree appellant has continued to argue this issue, Cvacho et al ['927] and Nixon et al are to be considered additionally applied to the 35 U.S.C. § 103 rejections involving Cvacho ['423] as evidence that the inner sleeve in Cvacho ['423] does indeed

have structural strength for the modifications provided in the rejections to provide a shrink wrap.

In that Cvacho ['927] and Nixon were never mentioned in the statement of the rejection of any of the claims prior to the examiner's answer, it is apparent that the inclusion of these references at this point constitutes new grounds of rejection, notwithstanding the examiner's views to the contrary and/or appellant's acquiescence on this point. In any event, in the interest of rendering a complete decision on the issues raised in the appeal, we shall consider Cvacho '927 and Nixon as part of the evidentiary basis in the rejections where Cvacho '423 has been applied.

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(d) claim 6, rejected under 35 U.S.C. § 103, as being unpatentable over Cvacho '423 in view of Hoffman, Cvacho '927 and Nixon as applied in rejection (c), and further in view of Roales and Potts;

(e) claims 7 and 9, rejected under 35 U.S.C. § 103, as being unpatentable over Cvacho '423 in view of Hoffman, Cvacho '927,

Nixon, Roales and Potts as applied in rejection (d), and further in view of Conklin;³

(f) claim 20, rejected under 35 U.S.C. § 102(b), as being anticipated by Hoffman;

(g) claims 10, 12-14, 16 and 19-24, rejected under 35 U.S.C. § 103, as being unpatentable over Hoffman in view of Cvacho '423 and Roales, and further in view of Cvacho '927 and Nixon;

³ On page 7 of the answer, the examiner appears to have inadvertently failed to include Roales and Potts in the statement of the rejection of these claims.

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(h) claims 17 and 18, rejected under 35 U.S.C. § 103, as being unpatentable over Hoffman in view of Cvacho '423, Roales, Cvacho '927 and Nixon as applied in rejection (g), and further in view of Sasaki;

(i) claim 25, rejected under 35 U.S.C. § 102(b), as being anticipated by Heckman;

(j) claim 25, rejected under 35 U.S.C. § 103, as being unpatentable over Heckman in view of Roales; and

(k) claim 25, rejected under 35 U.S.C. § 103, as being unpatentable over Roales in view of Heckman.

The rejections are explained in the examiner's answer (Paper No. 52, mailed August 16, 1996) and the supplemental examiner's answer (Paper No. 54, mailed November 14, 1996).

The opposing viewpoints of appellant are set forth in the brief (Paper No. 51, filed June 14, 1996) and the reply brief (Paper No. 53, filed October 16, 1996).

Rejections (a) and (b)

Considering first the rejection of claims 1, 3, 5, 6 and 8 as being anticipated by Roales, independent claim 1 requires that the thermoplastic sleeve that surrounds at least a

portion of the tubular container body is "shrunk thereon for radially inwardly squeezing said container body for increasing the axial strength thereof." In rejecting claim 1 as being anticipated by Roales, the examiner has taken the position with respect to this claim limitation that "[b]y its very nature the shrunk protective sleeve [of Roales] will apply a compressive force to increase the axial strength of the inner container" (answer, page 5). It thus appears to be the examiner's position that the label 42 of Roales will inherently function in the manner called for in claim 1. We cannot accept this position.

A careful reading of the specification of Roales indicates that the label thereof is secured to a container by adhering the leading end of the label to the container, wrapping the label about the container, and adhering the overlapping leading and trailing ends of the label to each other (column 4, lines 42-45

and 60-62; column 6, lines 6-10). The top and bottom of the label are thereafter shrunk into conformation with the tapered top and bottom portions of the container sidewall (column 5,

lines 2-4; column 6, lines 57-61; column 4, lines 45-65) to provide tapered portions 44 and 46 conforming to tapered portions 34 and 36 of the container. Reference letters A and B in Figure 2 indicate the magnitude of the deflection of the label at the upper and lower tapered portions, respectively, of the container.

While it reasonably appears that the label of Roales would squeeze the container side wall, at least to some degree, in the areas where it is shrunk into contact therewith, i.e., at the upper and lower tapered portions 34 and 36, Roales is silent as to the label functioning to radially inwardly squeeze the container body "for increasing the axial strength thereof," as required by claim 1. Further, the label of Roales is not stated to be for this purpose. See, for example, the objectives listed in Roales at column 2, line 55 through column 3, line 22. Finally, the examiner has not provided any evidence or scientific reasoning to establish the reasonableness of his belief that the functional limitation in question is an inherent characteristic

of Roales. In this regard, merely stating that the label of Roales, which is shrunk onto the container only at the tapered end portions of the container, will by its very nature function in the manner called for in the claim does not suffice. In light of the foregoing, we will not sustain the examiner's rejection of claim 1 as being anticipated by Roales, or claims 3, 5, 6 and 8 which depend therefrom.

Claims 7 and 9 depend from claim 1 and add that the thermoplastic sleeve is formed of polyester material and polyethylene terephthalate, respectively. In rejecting these claims, the examiner has additionally relied on Conklin for a teaching that these material are well known heat shrinkable materials. Even if we accept that it would have been obvious to make the sleeve of Roales of the materials called for in claims 7 and 9 in view of Conklin's teaching, the resulting modified Roales article would not necessarily correspond to the subject matter of claim 1, much less claims 7 and 9. See the discussion *supra* of claim 1. Furthermore, the examiner has not explained, and it is not apparent to us, where the combined teachings of Roales and Conklin disclose, suggest or

imply that the label of Roales should be shrunk onto the container to increase the axial strength thereof. Accordingly, we will not sustain the rejection of claims 7 and 9 as being unpatentable over the combined teachings of Roales and Conklin.

Rejections (c), (d) and (e)

Fundamental to each of these rejections is the examiner's position that it would have been obvious to one of ordinary skill in the art to shrink the load bearing outer housing 16 of Cvacho '423 to the thin metal inner container 12 thereof in view of Hoffman as a method of expediently applying the outer housing to the inner container, and thereby arrive at the subject matter of independent claim 1. We do not agree.

Cvacho '423, the primary reference, pertains to a laminated container comprising a very thin inner container 12 made of fluid-impervious metallic *foil* (column 2, line 13; column 4, lines 25-30) and a outer structural housing 16 made of comparatively inexpensive non-metallic material such as paper or "a suitable plastic" (column 4, lines 19-21 and 41-

44).⁴ Cvacho '423 does not even remotely hint that the outer housing 16 may be shrunk onto the thin foil inner container 12 to increase its axial strength. The examiner then looked to another prior art container, Hoffman, which, although including a sleeve shrunk fit onto a container body, also does not even remotely hint that the axial strength of the body of the container may be increased by shrinking the outer sleeve thereover. From these disclosures, the examiner concludes that it would have been obvious to arrive at the subject matter of claim 1 by shrink fitting the outer housing of Cvacho '423 over the thin inner container made of metallic foil.

Like appellant, we question at the outset whether it is feasible to shrink fit a plastic outer sleeve over the thin foil inner container 12 of Cvacho '423 without crushing it. In this regard, we share appellant's view that the disclosure of Cvacho '423 that the inner container 12 should be made of

⁴ In the statement of the rejection on page 6 of the answer, the examiner implies that Cvacho '423 discloses the outer housing as being made of *thermoplastic* material, however, this is not the case. Rather, Cvacho '423 merely states that the outer housing may be made of paper or "a suitable plastic" (column 4, line 21).

thin metal foil would act as a disincentive to one of ordinary skill in the art to make the sort of modification proposed by the examiner. Nothing in Cvacho '927 or Nixon lead us to a different conclusion. In particular, we simply do not agree with the examiner's statement that "[i]f such a thickness of a metallic container [i.e., the thickness of the metallic inner container disclosed in Cvacho '423 at column 4, line 53] can withstand an

internal pressure . . . it can withstand an external pressure of a shrunk sleeve on its exterior" (supplemental answer, page 2).

Turning to Hoffman, we observe that this reference is directed to:

Apparatus and method for applying heat shrinkable film to containers . . . [wherein, a] segment of film is applied to the vertical surface [of the container] *without heat shrinking* [i.e., by adhering the leading end of a segment of film to the container, wrapping the film around the bottle, and adhering the trailing end to the leading end] and with one or two end portions overlapping the re-entrant part of the article[,] . . . [h]eat [being] applied *to the overlap or overlaps to shrink them*

onto the article. [abstract, emphasis added]

Thus, the thrust in Hoffman is to apply heat locally to the overlapped upstanding end portions 20, 21 of the label to shrink these overlapped end portions to re-entrant portions of the container. Since the container of Cvacho '423 is not disclosed to have any re-entrant (i.e., reduced diameter) portions, and thus would not require any localized heating of the outer housing 16 to bring it into close contact with the inner container at the ends of the outer housing, it is not clear that one of ordinary skill in the art would consider Hoffman's teachings as being relevant to Cvacho '423. In any event, assuming that it would have been obvious to apply Hoffman's teachings in Cvacho '423, and further assuming that locally shrinking the outer housing to the inner foil container of Cvacho '423 would not crush the thin foil inner container, it is questionable whether Hoffman's localized heating and shrink fitting techniques would result in increasing the axial strength of the thin foil inner container of Cvacho '423 as called for in claim 1.

For these reasons, we cannot sustain the rejection of

claim 1, or claims 3, 5 and 8 which depend therefrom, as being unpatentable over Cvacho '423 in view of Hoffman, Cvacho '927 and Nixon. The Roales and Potts references additionally applied in the rejection of claim 6 (rejection (d)), and the Conklin reference additionally applied in the rejection of claims 7 and 9 (rejection (e)), do not make up for the deficiencies of the references applied in the rejection of claims 1, 3, 5 and 8. Therefore, these rejections also cannot be sustained.

Rejection (f)

Independent method claim 20 stands rejected as being anticipated by Hoffman. The method of claim 20 comprises the steps of providing a container having at least one open end for filling with a product, encircling at least a portion of the container with a thermoplastic film, and subjecting the film to elevated temperature and shrinking the film for applying compressive force to the container radially prior to filling and prior to applying an end closure to the open end.

Hoffman pertains to a system for applying heat shrink

film to containers. The portion of Hoffman relied upon by the examiner in the rejection is found in the background discussion at column 1, lines 21-34 and reads:

Heretofore apparatus and a method have been provided for applying heat shrink film to cylindrical containers by a series of steps as follows:

1. Heat shrink film is formed into a tube slightly larger in diameter than the container to which it is to be applied.
2. The container is preheated or, if the film application is carried on in conjunction with the manufacture of glass containers, the glass containers can be taken from the glass manufacturing operation while they are still hot or warm.
3. The cylindrical sleeve is placed over the container.
4. The sleeve is then heated to shrink it onto the container.

We are in agreement with the examiner that the practice of this method, especially as it relates to applying a heat shrink film to glass containers taken from a glass manufacturing operation, anticipates claim 20. In particular, we believe the steps of placing a cylindrical tube of heat shrink material on a container and then heating it to shrink the tube onto the container would inherently apply compressive

force to the container body radially thereof, as called for in step (c) of claim 20, at least to some degree.

Appellant's argument on page 10 of the brief is not persuasive that the examiner erred in making this rejection. With respect to appellant's statement that claim 20 "was allowed by the Board in the Decision of September 16, 1993 . . . over the teachings of the patents to Yazumi and Kaercher et al," we must point out that we did not allow claim 20 in that decision. Rather, we reversed the examiner's § 103 rejection thereof based on Yazumi and Kaercher. As to the argument that "no mention is made about axial strength of the container [in Hoffman]" (brief, page 10), this argument fails at the outset because it is not commensurate in scope with the claim. Note that claim 20 only calls for shrinking the film for applying a compressive force to the container body radially thereof.

We will therefore sustain the anticipation rejection of claim 20 based on Hoffman.

Rejections (g) and (h)

Independent method claim 10 calls for the steps of (a) providing a container body having an open end, (b) encircling

the container body with a thermoplastic film, (c) subjecting the film to elevated temperature and shrinking it for applying compressive force to the container body radially thereof, (d) placing an end closure on the container body and applying an axial force to the end closure and container body for securing the end closure to the container body, and (e) locating a portion of the thermoplastic film between the container body and the end closure and entrapping said portion during step (d).

In rejecting this claim, the examiner considers (answer, pages 8-11) that it would have been obvious to (1) employ the prior art method of column 1, lines 24-34 of Hoffman to a container of the type described in column 2, lines 9-10 and lines 23-24 of Hoffman, (2) fill the container with a product after the shrunk sleeve is applied as "implied in Cvacho ['423]" (answer, page 8), (3) thereafter forcibly apply an end closure to the container, and (4) locate, i.e., entrap, the sleeve between the container body and the container end closure in the manner called for in claim 10 in view of Figure 5 of Cvacho '423. In our opinion, this rejection amounts to a hindsight reconstruction of the claimed method using the

appellant's disclosure as a roadmap. In particular, it is our opinion that the collective teachings of the applied references do not disclose, suggest or imply the step of locating a portion of the shrunk film between the container body and container end closure and entrapping that portion therebetween during the step of applying an axial force to secure an end closure to a container body, as called for in step (e) of claim 10. We therefore will not sustain the rejection of claim 10, or any of claims 12-14 and 16-19 that depend therefrom.

As for the rejection of independent claim 20 based on Hoffman, Cvacho '423, Roales, Cvacho '927 and Nixon under § 103, as made clear in our discussion of rejection (f) supra, claim 20 lacks novelty over the prior art method set forth in column 1, lines 21-34 of Hoffman. While we appreciate that the examiner has expressed the rejection in terms of obviousness, we note that evidence (i.e., Hoffman) establishing lack of novelty in the claimed invention necessarily evidences obviousness. Lack of novelty has been characterized by one of the predecessors of our court of review as being the ultimate or epitome of obviousness. See

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In re Fracalossi, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982) and *In re Pearson*, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974). We therefore will sustain the examiner's rejection of claim 20 under § 103, noting that Cvacho '423, Roales, Cvacho '927 and Nixon are cumulative. We will also sustain the rejection of dependent claim 24 since appellant acknowledges on page 5 of the brief that this claim stands or falls with claim 20.

Claim 21 depends from method claim 20 and add the step of "forming said container body of thin gauge material incapable of resisting the axial forces applied during conventional filling and closing operations" Appellant's sole argument with respect to this claim is that it differs from parent claim 20 "by defining the use of thin gauge material . . . [which is] not discussed by the applied art" (brief, page 11). The term "thin gauge material" is a relative term. Further, the use of a relatively thin gauge material for a container body is discussed in the prior art, for example, in Cvacho '423 at column 4, lines 48-52. In our view, it would

have been obvious to make the container of Hoffman of relatively thin material for the self evident purpose of effecting a cost savings by minimizing the amount of material needed to make the container. Accordingly, as argued, we will sustain the § 103 rejection of claim 21 based on Hoffman and the other references cited thereagainst in rejection (g).

We likewise will sustain the rejection of dependent claim 22 based on Hoffman and the other references cited thereagainst in rejection (g) since this claim has not been separately argued with any reasonable degree of specificity in the argument with respect to claims 21-23 found on page 11 of the brief. *See, for example, In re Nielson*, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987).

We will not sustain the rejection of dependent claim 23 based on Hoffman and the other references cited thereagainst in rejection (g) since we agree with appellant that the applied prior art does not suggest the additional step of locating the thermoplastic film between the container body and the end closure and entrapping said portion during the step of sealing the container with the end closure, as called for in

this claim.

Rejections (i), (j) and (k)

With respect to the anticipation rejection of claim 25 based on Heckman (rejection (i)), the only claim limitation argued by appellant as distinguishing over Heckman is the requirement that the thermoplastic sleeve is shrunk onto the container body "for radially inwardly squeezing said container body . . . for increasing the axial strength of the container." Appellant contends that Heckman's sleeve 20 does not do this, whereas the examiner maintains that the sleeve of Heckman inherently increases axial strength when applied to a plastic container.

Heckman pertains to a method for assembling a plastic sleeve preform to a container. The preform comprises a tubular sleeve made of heat shrinkable plastic. The method of assembling the sleeve to a container involves several steps, which are illustrated in Figures 7-10. In Figure 7, the sleeve is positioned such that it loosely surrounds the container. Next, see Figure 8, a hot air stream is directed at the sleeve center region to shrink the central region of

the sleeve into contact with the container "to tack the sleeve against the container mid-body portion during continuing rotation of container and sleeve" (column 5, lines 53-55). Such tacking "effect[s] heat-shrinkage of the extensive central region" (column 5, lines 57-58). Then, as shown in Figure 9, heat is applied to the upper and lower extremities of the sleeve to cause the sleeve to contract around the heel and frusto-conical neck regions of the container to achieve the final product. Heckman states that "[t]he sleeve 20a when heat shrunk in this manner is wrinkle-free and smoothly adhered to the container surface therebeneath is [sic, in] *snug conforming relation* as shown in Fig. 10" (column 5, line 66 through column 6, line 2; emphasis added).

We agree with the examiner that Heckman's disclosure that the sleeve is heat shrunk to the container over substantially the full extent of the container so as to be in snug conforming relation with the container surface provides a reasonable basis for concluding that Heckman's sleeve will inherently function, at least to some degree, to squeeze the container to increase its axial strength. See *In re*

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Swinehart, 439 F.2d 210, 213, 169 USPQ 226, 229 (CCPA 1971).

In this regard, we observe that the claim does not specify to what extent the axial strength is increased, such that any increase in axial strength will satisfy this claim requirement.

Appellant argues that Heckman's description "of 'tacking' the central portion to prevent vertical movement and then causing the ends of the sleeve to be 'in snug conforming relation', falls woefully short of anticipating applicant's claimed invention of squeezing to increase axial strength" (brief, page 9). This argument is not well taken because it mischaracterizes Heckman's disclosure. The sentence bridging columns 5 and 6 of Heckman indicates that the sleeve itself, and not merely end portions thereof, is in snug conforming relation with the container. A sleeve that is heat shrunk throughout its axial extent to snugly conform to a substantial portion of the container body, as shown by Heckman in Figure 10, will squeeze the container and inherently increase its axial strength, at least to some degree, in our view. We therefore will sustain the anticipation rejection of claim 25

based on Heckman.

With respect to the § 103 rejections of claim 25 based on Heckman and Roales, we again note that evidence establishing lack of novelty in the claimed invention necessarily evidences obviousness. See *In re Fracalossi*, 681 F.2d at 794, 215 USPQ 5 at 571 and *In re Pearson*, 494 F.2d at 1402, 181 USPQ at 644. In that claim 25 lacks novelty over Heckman for the reasons noted above, we will sustain the examiner's rejections of claim 25 under § 103 as being unpatentable over Heckman and Roales (rejections (j) and (k)), noting that Roales is merely cumulative in these rejections.

Summary

The rejection of claim 20 as being anticipated by Hoffman (rejection (f)) is affirmed.

The rejection of claims 10, 12-14, 16, 19-24 as being unpatentable over Hoffman in view of Cvacho '423 and other references (rejection (g)) is affirmed as to claims 20-22 and 24, but is reversed as to claims 10, 12-14, 16, 19 and 23.

The rejection of claim 25 as being anticipated by Heckman (rejection (i)), and the rejections of claim 25 as being

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unpatentable over Heckman and Roales (rejections (j) and (k))
are also affirmed.

All other rejections (rejections (a) through (e) and (h))
are reversed.

The decision of the examiner is affirmed-in-part.

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED-IN-PART

BRUCE H. STONER)	
Chief Administrative Patent Judge))
)	
)	
HARRISON E. McCANDLISH)	BOARD OF PATENT
Senior Administrative Patent Judge)) APPEALS AND
)	INTERFERENCES
)	
LAWRENCE J. STAAB)	
Administrative Patent Judge)	

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William H. Holt
727 Twenty-Third Street South
Arlington, VA 22202